

COMPLETE LISTING OF CLAIMS

IN ASCENDING ORDER WITH STATUS INDICATOR

1-12 (Cancelled)

13. (New) A composite dielectric filter device comprising:

a dielectric block;

a plurality of inner conductors extending in parallel from a first face of the dielectric block to a second face opposite the first face;

an outer conductor arranged on at least some outer faces of the dielectric block so that groups of adjacent inner conductors among the plurality of inner conductors form at least two mutually adjacent filters;

an outer-conductor-free portion formed at a part of the outer conductor corresponding to a boundary between the at least two mutually adjacent filters; and

an input/output terminal shared by the at least two mutually adjacent filters, wherein

at least a part of the input/output terminal is provided on the first face of the dielectric block and is isolated from the outer conductor, and

each of the inner conductors of the groups of adjacent inner conductors are directly connected to each other by the outer conductor along the first face of the dielectric block.

14. (New) The composite dielectric filter device according to Claim 13, wherein the outer-conductor-free portion is formed continuously around outer faces of the dielectric block.

15. (New) The composite dielectric filter device according to Claim 13, wherein the outer-conductor-free portion is arranged continuously with a periphery of the input/output terminal.

16. (New) The composite dielectric filter device according to Claim 13, further comprising ground-connectable metal covers connected to the outer conductor of the dielectric block, the metal covers being arranged independently for respective parts of the outer conductor separated by the outer-conductor-free portion.

17. (New) The composite dielectric filter device according to Claim 13, wherein at least one of the plurality of inner conductors is a stepped hole having different diameters at the first face and the second face.

18. (New) The composite dielectric filter device according to Claim 17, wherein the diameter of the at least one stepped hole at the first face is smaller than the diameter at the second face.

19. (New) The composite dielectric filter device according to Claim 13, wherein the plurality of inner conductors are planar inner conductors.

20. (New) The composite dielectric filter device according to Claim 13, further comprising a conductor hole formed in the dielectric block and extending from the first face to the second face of the dielectric block, the conductor hole being conducted to the part of the input/output terminal on the first face of the dielectric block.

21. (New) A communication apparatus comprising the composite dielectric filter device according to Claim 13, wherein:

the composite dielectric filter device forms an antenna duplexer,
the at least two mutually adjacent filters comprise a transmitting filter and a receiving filter having a transmitting terminal and a receiving terminal, respectively,
the input/output terminal is an antenna terminal for the duplexer, and
a high-frequency circuit is connected to at least one of the transmitting terminal and the receiving terminal.

22. (New) A composite dielectric filter device comprising:

a dielectric block;

a plurality of inner conductors extending in parallel from a first face of the dielectric block to a second face opposite the first face;

an outer conductor arranged on at least some outer faces of the dielectric block so that groups of adjacent inner conductors among the plurality of inner conductors form at least two mutually adjacent filters;

an outer-conductor-free portion formed at a part of the outer conductor corresponding to a boundary between the at least two mutually adjacent filters; and

an input/output terminal shared by the at least two mutually adjacent filters,
wherein

at least a part of the input/output terminal is provided on a third face of the dielectric block which is parallel to the plurality of inner conductors and is isolated from the outer conductor,

the outer-conductor-free portion is arranged continuously with a periphery of the input/output terminal and is provided on both the third face of the dielectric block and a fourth face of the dielectric block which is opposite the third face, and

the first face of the dielectric block is an open-circuited face and does not include the outer conductor at a portion between the at least two mutually adjacent filters.

23. (New) The composite dielectric filter device according to Claim 22, further comprising ground-connectable metal covers connected to the outer conductor of the dielectric block, the metal covers being arranged independently for respective parts of the outer conductor separated by the outer-conductor-free portion.

24. (New) The composite dielectric filter device according to Claim 22, wherein at least one of the plurality of inner conductors is a stepped hole having different diameters at the first face and the second face.

25. (New) The composite dielectric filter device according to Claim 24, wherein the diameter of the at least one stepped hole at the first face is smaller than the diameter at the second face.

26. (New) The composite dielectric filter device according to Claim 22, wherein the plurality of inner conductors are planar inner conductors.

27. (New) A communication apparatus comprising the composite dielectric filter device according to Claim 22, wherein:

the composite dielectric filter device forms an antenna duplexer,
the at least two mutually adjacent filters comprise a transmitting filter and a receiving filter having a transmitting terminal and a receiving terminal, respectively,
the input/output terminal is an antenna terminal for the duplexer, and
a high-frequency circuit is connected to at least one of the transmitting terminal and the receiving terminal.
